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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,984	07/10/2003	Sang-Whook Kim	1293.1747	1247
21171	7590	06/14/2007		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER HALEY, JOSEPH R	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 06/14/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/615,984	Applicant(s) KIM ET AL.	
	Examiner Joseph Haley	Art Unit 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-22, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 7, 8, 10, 11, 13-15, 17, 18, 20 and 32 is/are rejected.
- 7) ☒ Claim(s) 3, 6, 9, 12, 19 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 8 are rejected under 35 U.S.C. 103(a) as being obvious over Oonishi (US 5295125).

In regard to claim 1, Oonishi teaches a method of identifying a type of a disc, comprising: detecting an RPM (Rotation Per Minute) of the disc; and identifying a first disc type by comparing the RPM with a first reference value (fig. 6 see also column 7 lines 65-68 and column 8 lines 1-6) but does not teach wherein the first reference value is in the form of an RPM.

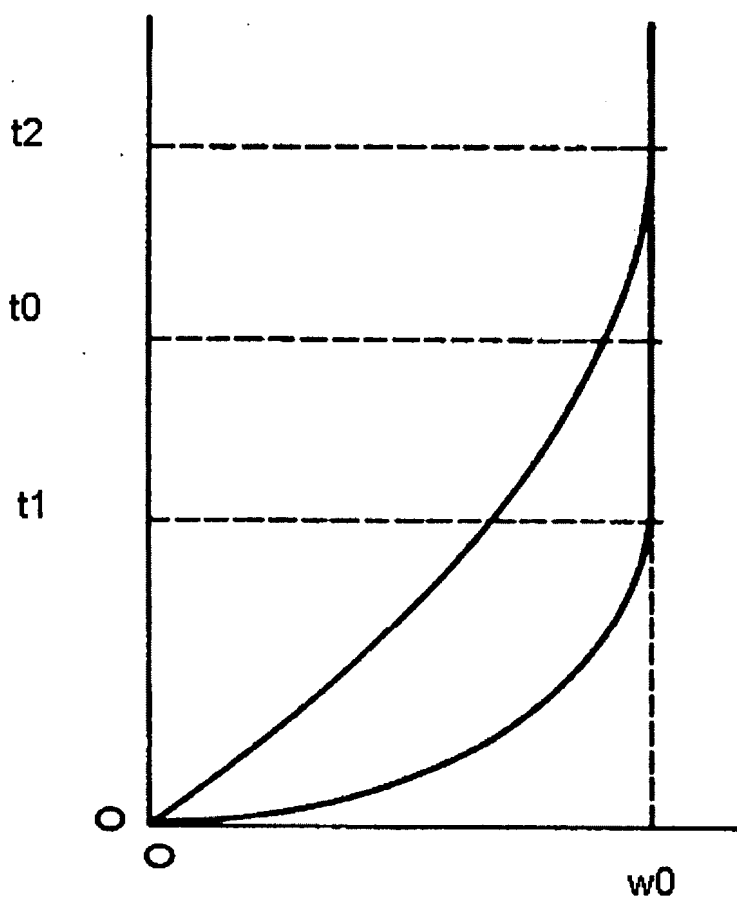
At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Oonishi with an RPM reference value. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Oonishi with an RPM reference instead of a time reference value because the use of a RPM value instead of a time reference value is considered an art recognized equivalent in the art that is used for the same purpose, in the same environment, and achieves the same results.

Oonishi teaches using the time it takes for the disc to reach a certain speed as the reference value instead of the rotation speed of the disc. If Oonishi were to use the

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rotation speed at a certain time as a reference value it would be the same as the claimed invention. To flip the graph of Oonishi around would have been obvious to one of ordinary skill in the art.

In the graph below, the speed (RPM) becomes the reference value. The graph below is a flipped version of Fig. 6 of Oonishi.



On this graph, the speed is now on the x axis making it the reference value. The time is now the y axis. Using the graph this way would be obvious to one of ordinary skill in the art.

In regard to claim 2, Oonishi teaches identifying of the first disc type includes determining whether the disc is a DVD(-) type or a DVD(+) type (Oonishi teaches discriminating between a CD and a DVD. A DVD must be either a (+) or a (-).

In regard to claim 8, Oonishi teaches an apparatus identifying a type of a disc, comprising: a motor rotating the disc; and a system controller identifying the type of the disc by comparing an RPM of the disc detected using a frequency signal generated at the motor with a first reference value (fig. 6 see also column 7 lines 65-68 and column 8 lines 1-6).

In regard to the reference value see claim 1 rejection above.

Claims 4-5, 10-11, 13, 15, 17-18 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oonishi in view of Ono et al. (US 6822936).

In regard to claim 4, Oonishi teaches all the elements of claim 4 except measuring reflectivity of the disc; and identifying a second disc type between a one-time recordable type and a re-recordable type by comparing the reflectivity of the disc with a second reference value.

Ono et al. teaches measuring reflectivity of the disc; and identifying a second disc type between a one-time recordable type and a re-recordable type by comparing the reflectivity of the disc with a second reference value (fig. 2 element 2090).

The two are analogous art because they both deal with the same field of invention of discriminating optical discs.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Oonishi with the reflectivity measurement of Ono et al. The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Oonishi with the reflectivity measurement of Ono et al. because it would allow a user to determine whether or not a disc can be re-written.

In regard to claim 5, Ono et al. teaches identifying of the second disc type includes determining that the disc is the one-time recordable disc type if the reflectivity is higher than the second reference value and that the disc is the re-recordable disc type if the reflectivity is not higher than the second reference value (fig. 2 element 2090).

In regard to claim 10, see claim 4 rejection above.

In regard to claim 11, see claim 5 rejection above.

In regard to claim 13, Ono et al. teaches measuring a reflectivity of light from a disc to identify the disc format as a one-time recordable type if the reflectivity is higher than a reflectivity reference value and as a recordable type if the reflectivity is less than the reflectivity reference value (fig. 2)

Oonishi teaches measuring an RPM of the disc to identify the disc format as a DVD(-) type disc if the RPM is lower than a speed reference value or as a DVD(+) type if the RPM is higher than the speed reference value (fig. 6 see also column 7 lines 65-68 and column 8 lines 1-6).

In regard to claim 15, Oonishi teaches the measuring the RPM comprises using a frequency signal generated by a motor that rotates the disc (fig. 1 element 60 the rotary motor generates a frequency signal to move the motor).

In regard to claim 17, see claim 13 rejection above.

In regard to claim 18, Ono et al. teaches setting the reflectivity reference value to identify the disc as a DVD-R or a DVD+R type if the reflectivity is between 45% and 80% and as a DVD-RW or DVD+RW type if the reflectivity is between 18% and 30% (paragraph 74).

In regard to claim 32, see claim 13 rejection above.

Claims 7, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oonishi in view of Ono et al further considered with Aoki (US 6201773)

In regard to claims 7, 14 and 20 Oonishi teaches all the elements of claims 7, 14 and 20 except the detection of the RPM is performed after converting a motor control mode rotating the disc into a CLV (Constant Linear Velocity) servo mode based on a wobble signal.

Aoki teaches the detection of the RPM is performed after converting a motor control mode rotating the disc into a CLV (Constant Linear Velocity) servo mode based on a wobble signal (column 1 lines 40-41. see also column 7 lines 10-16).

The three are analogous art because they all deal with the same field of invention of recording on optical discs.

At the time of invention it would have been obvious to one of ordinary skill in the art to provide the apparatus of Oonishi and Ono et al. with the speed control of Aoki.

The rationale is as follows: At the time of invention it would have been obvious to provide the apparatus of Oonishi and Ono et al. with the speed control of Aoki because wobble speed control can control the speed of the disc according to address information.

In regard to claim 20, it is inherent that there would be stable motor control if the disc is identified as any type of disc.

***Allowable Subject Matter***

Claims 3, 6, 9, 12, 19, and 21-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for allowance in previous Office Action.

Claim 31 is allowed.

***Response to Arguments***

Applicant's arguments with respect to claims 1 and 8 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 3/29/07 have been fully considered but they are not persuasive. On page 7, paragraph 6, applicant argues that Oonishi does not teach "identifying of the first disc type includes determining whether the disc is a DVD(-) type or a DVD(+) type". However the examiner maintains this rejection because when the apparatus of Oonishi determines that the inserted disc is a DVD, it inherently determines it is a + or - type. The claim does not require that the apparatus of Oonishi



discriminate between the two types. Therefore, when it is determined to be a DVD it is also determined to be some kind of DVD, or a + or – type.

Applicant argues on page 8, the Ono et al. does not teach “identifying a second disc type between a one-time recordable type and a re-recordable type by comparing the reflectivity of the disc with a second reference value”. However, the examiner maintains this rejection because it is quite clear from fig. 2 element 2090 that this is taught by Ono et al. If the reflectivity is higher than a predetermined value then Ono et al. determines it is one of a DVD-ROM or DVD-R. If its lower than predetermined value than it is determined to be a DVD-RAM or DVD-RW.

Applicant argues on page 10, that Aoki does not teach “detection of the RPM is performed after converting a motor control mode rotating the disc into a CLV (Constant Linear Velocity) servo mode based on a wobble signal”. However, the examiner maintains this rejection because as is shown in column 7 lines 10-16, Aoki teaches detecting the speed of the spindle motor and using it as feed back to control the rotation of the disc. This is detecting the RPM after converting a motor control mode rotating the disc into a CLV.

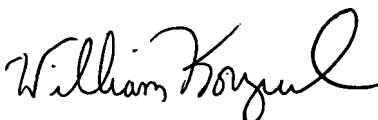
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Haley whose telephone number is 571-272-0574. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jrh

  
**WILLIAM KORZUCH**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**